

Amendment Dated November 29, 2007
Serial No. 10/084,201

IN THE CLAIMS

Claim 1. (Currently Amended) ~~At a first node within a mesh network, a~~ A method of combining ~~protection paths on a mesh network, the first and second protection paths between said first node and a second node, wherein said first and second protection paths comprise first and second protection channels, respectively, said method comprising the steps of:~~

defining a first protection path between a first source node and a first destination node via at least one intermediate node;

reserving bandwidth on first links along the first protection path that extends from the first source node, through the intermediate node, and ending at the first destination node, to form first channels on the first links between the nodes along the first protection path, wherein each of the first channels comprises a first reserved bandwidth on a particular link between a pair of first nodes on the first protection path;

defining a second protection path between a second source node and a second destination node via at least one of the intermediate nodes of the first protection path;

assessing, by one of the intermediate nodes shared by the first protection path and the second protection path, if it is proper for the second channel on the second protection path to use the reserved bandwidth allocated to the first channel associated with the first protection path said first and second protection paths may be combined; and

allocating the first reserved bandwidth associated with the first channel to both the first protection path and second protection path if it is determined during the step of assessing that the second channel on the second protection path can use the reserved bandwidth allocated to the first channel associated with the first protection path releasing said first protection channel, and replacing said first protection channel with said second protection channel along said first protection path if said first protection path may be combined with said second protection path.

Claim 2. (Currently Amended) The method of claim 1, further comprising determining if a first working path protected by said first protection path and a second working path protected by said second protection path share common resources to determine if it is proper to for the second channel to use the reserved bandwidth allocated to the first channel said first protection path may be combined with said second protection path.

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Claim 3. (Currently Amended) The method of claim 1, further comprising determining if said second protection channel has already been shared along a defined number of other protection paths, to determine if it is proper to for the second channel to use the reserved bandwidth allocated to the first channel ~~said first protection path may be combined with said second protection path at said first node.~~

Claim 4. (Canceled)

Claim 5. (Currently Amended) The method of claim 1 ~~claim 4~~, further comprising comparing resources along said first protection path to resources along said second protection path to determine if it is proper to for the second channel to use the reserved bandwidth allocated to the first channel ~~said first working path and said second working path share a common point of failure.~~

Claim 6. (Currently Amended) The method of claim 5, further comprising querying a source of a said first working path associated with the first protection path, to obtain an indicator of resources for said first working path.

Claim 7. (Currently Amended) The method of claim 6, further comprising querying a source of a said second working path associated with the first protection path to obtain an indicator of resources for said second working path.

Claim 8. (Currently Amended) The method of claim 5, further comprising querying nodes along a said first working path associated with the first protection path, to obtain an indicator of resources for said first working path.

Claim 9. (Currently Amended) The method of claim 6, further comprising querying nodes along a said second working path associated with the first protection path to obtain an indicator of resources for said second working path.

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Claim 10. (Original) The method of claim 7, further comprising assessing if said first working path share one or more common points of failure with said second protection path.

Claim 11. (Currently Amended) The method of claim 7 ~~claim 4~~, further comprising assessing if said second working path shares a common point of failure with said first protection path.

Claim 12. (Currently Amended) The method of claim 4, further comprising determining if said ~~existing~~ first protection channel is already shared by a defined number of additional protection paths to determine if it is proper to for the second channel to use the reserved bandwidth allocated to the first channel.

Claims 13-16. (Canceled)

17. (New) The method of claim 1, further comprising reserving bandwidth other than the reserved bandwidth allocated to the first channel, for the second channel, if it is determined during the step of assessing that the second channel on the second protection path can not use the reserved bandwidth allocated to the first channel associated with the first protection path.